

What is claimed is:

1. A method of decentralized control of variable frequency drives on a single branch comprising the steps of:
  - selecting a control protocol;
  - providing a power input branch having a single group installation branch protection;
  - connecting in series with the input branch at least two drive branches with the input branch, each of the drive branches having a drive with individual overload protection; and
  - transmitting a control signal based on the selected control protocol from the input branch to the drive branches.
2. A method according to claim 1, wherein said control protocol selecting step comprises selecting the control protocol from PROFIBUS, InterBus, DeviceNet, and CANopen.
3. A method according to claim 1 further comprising selecting a maximum rated fuse for the group installation branch protection.
4. A method according to claim 1, wherein said drive branch connecting step comprises:
  - connecting a first drive branch with the input branch; and
  - connecting in parallel with the first drive branch from a load side of the group installation branch protection of the input branch at least one additional drive branch;wherein said drive branches include a field distributor connected with a drive.

5. A method according to claim 4 further comprising selecting a field distributor based on the selected control protocol prior to said drive branch connecting step.
6. A method according to claim 5, wherein the field distributor has a disconnect switch for load disconnection.
7. A method according to claim 6 further comprising selecting a field bus interface of the field distributor based on the selected control protocol when selecting the field distributor.
8. A method according to claim 4 further comprising connecting at least one of at least one sensor and at least one actuator to the field distributor.
9. A method according to claim 1 further comprising selecting a control input from a programmable logic controller, personal computer, and workstation, prior to said control signal transmitting step.
10. A method of decentralized control of variable frequency drives on a single branch comprising the steps of:
  - providing an input branch having a single group installation branch protection;
  - connecting in series at least two field distributors to the input branch, each of the field distributors having a disconnect switch for load disconnection and line protection;

connecting a drive having integrated overload protection to each of the field distributors;  
and  
transmitting a control signal from the input branch to the field distributors.

11. A method according to claim 10 further comprising:  
selecting a control protocol prior to said input branch providing step; and  
selecting a field bus interface for the field distributors based on the selected control protocol.
12. A method according to claim 11, wherein said field bus interface selecting step is performed by selecting from PROFIBUS, InterBus, DeviceNet, and CANopen type interfaces.
13. A method according to claim 10 further comprising selecting the drive from a variable speed drive and a fixed speed drive prior to said drive connecting step.
14. A method according to claim 10, wherein said drive connecting step is performed using a plug connector.
15. A method according to claim 10 further comprising selecting a maximum rated fuse for the group installation branch protection.

16. A method according to claim 10 further comprising the step of selecting a control input from a programmable logic controller, personal computer, and workstation, prior to said control signal transmitting step.
17. A control system for group drive installations on a single branch, said system comprising:  
an input branch having a group installation branch protection;  
a first drive installation connected with said input branch;  
at least one subsequent drive installation connected in parallel with said first drive installation at a load side of said group installation branch protection, each of said first drive installation and said at least one subsequent drive installation comprising:  
a field distributor; and  
a motor connected to said field distributor; and  
an interconnecting line connecting said input branch, said first drive installation, and said at least one subsequent drive installation.
18. A control system according to claim 17, wherein said input branch comprises:  
a field bus; and  
a power input branch having a power supply connected to the group installation branch protection and a control power input.
19. A control system according to claim 18 further comprising a bus controller connected to said field bus, wherein said bus controller transmits a signal to control said geared drive.

20. A control system according to claim 19, wherein said bus controller is selected from a programmable logic controller, a personal computer, and a workstation.
21. A control system according to claim 19 further comprising at least one actuator connected to said field distributor, wherein said at least one actuator is controlled by a signal transmitted from said bus controller.
22. A control system according to claim 17, wherein said field distributor comprises:  
a field bus interface; and  
a field distributor connection module coupled with said field bus interface.
23. A control system according to claim 22, wherein said field distributor connection module comprises at least one digital input connector and at least one digital output connector.
24. A control system according to claim 22, wherein said field bus interface is selected from an interface compatible with one of DeviceNet, InterBus, CANopen, and PROFIBUS protocols.
25. A control system according to claim 17, wherein said field distributor comprises an integrated frequency inverter.
26. A control system according to claim 18, wherein said interconnecting line comprises power input branch after leaving branch protection, control power input, and field bus.

27. A control system according to claim 17, wherein said field distributor is connected to said motor via a hybrid cable.

28. A control system according to claim 27, wherein said field distributor has a motor disconnect.